Investigating friction 1

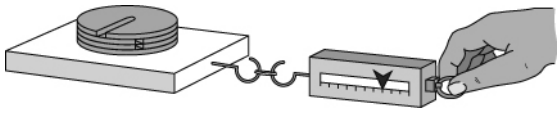
Name _____ **Class** _____ **Date** _____

Your teacher may watch to see if you can:

- follow instructions to carry out an investigation
- record accurate results.

Hypothesis

The amount of friction depends on the force pressing two surfaces together.



Prediction

1 Write a prediction for your investigation. _____

_____

_____

Method

A Attach the force meter to the block.

B Gently pull the block along the bench surface. Read the force meter and write down the force needed to pull it.

C Pull the block twice more and write the results in the table.

D Put a 100 g mass on the block and repeat steps **A** to **C**.

E Repeat steps **A** to **C** with the other masses shown in the results table.

Apparatus

- force meter
- wooden block with a hook
- 100 g masses

⚠ Take care that the block does not fall off the bench.

Recording your results

Mass on block (g)	Force needed to pull block (N)			Mean force (N)
	1st pull	2nd pull	3rd pull	
0				
100				
200				
300				
400				
500				

2 Find the mean force for each mass. (Add up all three results, then divide your answer by 3.)

3 Show your results in a scatter graph.

Considering your results/conclusions

4 It took the biggest force to pull the block with _____ on it. It took the smallest force to pull the block with _____ on it.

5 The _____ the mass on the block, the _____ the force pressing the block and the bench together. The _____ the force pressing surfaces together, the _____ the friction between them.

I can...

- make and record careful observations
- calculate means
- draw a conclusion.